

LISTING OF CLAIMS

1. (currently amended) A hinge biased toward open and closed positions, comprising:

a first bracket adapted to be mounted to a first workpiece, said first bracket comprising a generally tubular sleeve and opposed spaced-apart surfaces including first openings that are aligned with each other;

a second bracket adapted to be mounted to a second workpiece, said second bracket comprising opposed spaced-apart surfaces including second openings that are aligned with each other;

said first bracket and said second bracket being oriented with respect to each other effective to align said first openings with said second openings;

a hinge pin received in said first openings and said second openings effective to enable said first bracket to be pivotally movable relative to said second bracket, said tubular sleeve extending generally parallel with an axis of said hinge pin;

a spring having a serpentine geometry and a generally L-shape in a direction of said hinge pin axis when said spring is in a relatively stable state, said spring comprising first and second end portions, said first end portion being pivotally received in said sleeve and extending generally parallel with said hinge pin and said second end portion contacting said second bracket and extending generally parallel with said hinge pin, a center reference line extending transversely between said hinge axis and an axis of said second end portion of said spring;

wherein when said first bracket is pivoted relative to said second bracket said first end portion of said spring disposed in said sleeve travels in a substantially arcuate path around said hinge pin axis between open and closed positions of the hinge, and movement of said hinge between said open and closed positions that locates said first end portion near said center line reduces a distance between said first end portion and said second end portion thereby generating a spring force that urges said first end portion away from said center line and said hinge toward one of said open and closed positions.

2. (original) The hinge of claim 1 wherein said spring is comprised of metal wire.

3. (currently amended) The hinge claim 1 wherein said spring comprises a first generally inverted U-shaped portion including a first leg at said first end portion received by said sleeve, a second leg that is generally parallel with said first leg and a first intermediate portion extending transversely between said first leg and said second leg, and a second generally U-shaped portion including said second leg, a third leg that contacts said second bracket and extends generally parallel to said second leg and a second intermediate portion extending transversely between said second leg and said third leg, wherein said first generally inverted U-shaped portion extends transversely to said second generally U-shaped portion to form said generally L-shape when said spring is in a relatively stable state.

4. (original) A door assembly comprising the hinge of claim 1 comprising a door to which a set of said hinges is connected, wherein said first workpiece is comprised of said door and said second workpiece is a surface to which said door can be pivotally connected.

5. (original) The door assembly of claim 4 comprising a set of hinge cavities in internal surfaces of a periphery of said door, said hinge cavities being configured to receive said hinge pins within said door effective to enable said hinges to be hidden by said door in open and closed positions of said door.

6. (original) An article comprising said door assembly of claim 4.

7. (original) The article of claim 6 wherein said article is a utility body adapted to be mounted to a truck chassis of a utility vehicle comprising body side storage

compartment units, said storage compartment units comprising door openings, each said door assembly being pivotally connected to said storage compartment units so as to cover said door openings.

8. (original) The article of claim 6 wherein said article is a body of a motor vehicle comprising door openings, each said door assembly being pivotally connected to a surface of said body so as to cover one of said door openings.

9. (original) The article of claim 6 wherein said article is a tool box, said tool box forming a door opening, said door assembly being pivotally connected to said tool box so as to cover said door opening.

10. (original) The article of claim 9 wherein said tool box is adapted to be mounted across a bed of a pick-up truck.

11. (currently amended) A utility body adapted to be mounted to a truck chassis of a utility vehicle comprising:

body side storage compartment units comprising door openings;

doors that cover said door openings, each said door including a set of hinge cavities in internal surfaces of a periphery of said door;

hinges that pivotally connect said doors to said storage compartment units with a bias toward open and closed positions, each of said hinges comprising:

a first bracket mounted to said door, said first bracket comprising a generally tubular sleeve and opposed spaced-apart surfaces including first openings that are aligned with each other;

a second bracket mounted to said storage compartment units, said second bracket comprising opposed spaced-apart surfaces including second openings that are aligned with each other;

said first bracket and said second bracket being oriented with respect to each other effective to align said first openings with said second openings;

a hinge pin received in said first openings and said second openings effective to enable said first bracket to be pivotally movable relative to said second bracket, said tubular sleeve extending generally parallel with an axis of said hinge pin;

20 a spring having a serpentine geometry and a generally L-shape along a direction of said hinge pin axis when said spring is in a relatively stable state, said spring comprising first and second end portions, said first end portion being pivotally received in said sleeve and extending generally parallel with said hinge pin and said second end portion contacting said second bracket and extending generally parallel with said hinge pin, a center reference line extending ~~transversely~~ between said hinge axis
25 and an axis of said second end portion of said spring;

wherein when said first bracket is pivoted relative to said second bracket said first end portion of said spring disposed in said sleeve travels in a substantially arcuate path around said hinge pin axis between open and closed positions of the hinge, and movement of said hinge between said open and closed positions that locates
30 said first end portion near said center line reduces a distance between said first end portion and said second end portion thereby generating a spring force that urges said first end portion away from said center line and said hinge toward one of said open and closed positions;

wherein said hinge cavities are configured to receive said hinge pins within said
35 doors effective to enable said hinges to be hidden by said doors in open and closed positions of said doors.

12. (original) The utility body of claim 11 wherein said spring is comprised of metal wire.

13. (currently amended) The utility body of claim 11 wherein said spring comprises a first generally inverted U-shaped portion including a first leg at said first end portion received by said sleeve, a second leg that is generally parallel with said first leg and a first intermediate portion extending transversely between said first leg and said second leg, and a second generally U-shaped portion including said second leg, a

third leg that contacts said second bracket and extends generally parallel to said second leg and a second intermediate portion extending transversely between said second leg and said third leg, wherein said first generally inverted U-shaped portion extends transversely to said second generally U-shaped portion to form said generally L-shape when said spring is in the relatively stable state.

14. (new) A hinge biased toward open and closed positions, comprising:
a first bracket adapted to be mounted to a first workpiece, said first bracket comprising a generally tubular sleeve and opposed spaced-apart surfaces including first openings that are aligned with each other;

a second bracket adapted to be mounted to a second workpiece, said second bracket comprising opposed spaced-apart surfaces including second openings that are aligned with each other;

said first bracket and said second bracket being oriented with respect to each other effective to align said first openings with said second openings;

a hinge pin received in said first openings and said second openings effective to enable said first bracket to be pivotally movable relative to said second bracket, said generally tubular sleeve extending generally parallel with an axis of said hinge pin;

a spring having a serpentine geometry and a generally L-shape in a direction of said hinge pin axis when said spring is in a relatively stable state, said spring comprising first and second end portions, said first end portion being pivotally received in said generally tubular sleeve and said second end portion being connected to said second bracket in a fixed position, said first end portion and said second end portion extending generally parallel with said hinge pin axis, a center reference line extending between said hinge pin axis and an axis of said second end portion of said spring;

wherein when said first bracket is pivoted relative to said second bracket said first end portion of said spring disposed in said generally tubular sleeve travels in a substantially radial path around said hinge pin axis and intersects said center line between open and closed positions of the hinge, and movement of said hinge between said open and closed positions that locates said first end portion near said center line

reduces a distance between said first end portion and said second end portion thereby generating a spring force that urges said first end portion away from said center line and said hinge toward one of said open and closed positions.